Result Page

The invention relates to a Fahrzeugtüre, in particular Seitentüre of a passenger car, in accordance with the preamble of the claim 1.

top

From the DE-OS 21 03344 a Fahrzeugtüre with an upright longitudinal guide rail follows, which cooperates on the one hand with a höhenverstellbaren door window disk and on the other hand with a triangle window. A lower end region of this guide rail is connected with an attaching bracket, which is immediate held at the door body in layer.
The drawback adheres to this arrangement that the attachment of the guide rail can become only made during removed door inside paneling.
An adjustability of the guide rail relative to the door body is not provided with this arrangement. The arising tolerances of pane and structure (guide rail) are to become by the fact balanced that are provided within the guide rail two cooperative with one another uses, whose production and assembly are costly.

Object of the invention is it in such a way to train a guide rail further for a vehicle door, provided with a finallateral attaching bracket that with simple construction large installation and manufacturing tolerances balanced to become to be able and that a simple attachment of the guide rail at the door body is also possible during mounted door inside paneling. Furthermore a rotating movement of the guide rail is to become with tightening the fastening screw avoided.

This object becomes according to invention by the characterizing features of the claim 1 dissolved. Other ones, the invention in advantageous manner out-arranging features contain the Unteransprüche. The achieved advantages major with the invention are to be seen in the fact that by the arrangement of an adjusting device large tolerances balanced held cooperative with the attaching bracket at the door body in layer to become to be able. By an opening disposed at the outside periphery of the door body a fastening screw is importable and pivotable for the establishment of the guide rail, so that the attachment of the guide rail can take place also during complete mounted door inside paneling. After made adjustment this opening becomes by removable plug a sealed. The opening is preferably provided at in sections horizontal formed underside of the door body. The adjusting device formed from a fixed retaining support, a securing plate and recesses at the retaining support and the securing plate exhibits a simple, inexpensive structure. By the Führungsstege disposed at the securing plate a defined sliding movement of securing plate, attaching bracket and guide rail in longitudinal direction of the door becomes ensured.
, Upward the turned off flanges formed at the securing plate embrace the foot portion of the attaching bracket positive and cause that with tightening the fastening screw the guide rail cannot rotate inversely to the window pane. By the adjusting device ensured becomes that the bias of the door frame can become relative the sealing surface at the door carcass adjusted.

An embodiment of the invention is in the drawing shown and becomes in the following more near explained.

It shows:

Fig. 1 a side view on a vehicle door
Fig. 2 a detail X of the Fig. 1 in larger yardstick with the adjustment means according to invention
Fig. 3 an exploded view of the parts of the adjustment means in larger yardstick
Fig. 4 a section after the line IV - IV the Fig. 2 in larger yardstick
Fig. 5 a view in arrow direction R of the Fig. 2 in larger yardstick
Fig. 6 a section after the line VI - VI the Fig. 5
A vehicle door 1, in particular a Seitentüre for a passenger car, covers in accordance with Fig. 1 a door body 2 with a guide rail 3, whereby the guide rail exhibits 3 receiving portions for a triangle window 4 and a höhenverstellbare door window disk 5, not represented more near.

In the embodiment the upright, oblique-longitudinal guide rail 3 at their end 6 with a frame portion 7 of the triangle window 4 connected is, against what the other end 8 bottom interposition of an attaching bracket 9 and adjustment means 10 at a lower edge area 11 of the door body is 2 fixed. The guide rail 3 is opposite a transverse vertical plane A-A a bottom angle alpha and opposite a prolonged-longitudinal vertical plane B-B around an angle beta inclined. In accordance with Fig. 1 extended itself the guide rail 3 in sections hidden within the door body 2, against what it runs above a belt line 12 exposed. There is also the possibility that itself the guide rail 3 only up to the height of the belt line 12 upward extended.

To a lower end region 13 of the guide rail 3 the attaching bracket is 9 connected (Fig. 2 and 3). This is in the side view seen about L-shaped profiled and sits down from one for instance in extension of the guide rail 3 longitudinal elongated upright portion 14 and a second, vertical shorter foot portion 15 aligned in addition together (Fig. 2).
The upright portion 14 consists - in transverse direction seen - of two angular joined together regions 16, 17, whereby the overhead region 16 rests in sections against the outside of the guide rail 3 and is over a screw connection 18 with this connected (Fig. 5 and 6).
An elongated slot opening 19 effected disposed in the region 15 that an adjustability between guide rail 3 and attaching bracket is 9 given toward CC (height direction).
The portions 14, 15 of the attaching bracket 9 are in the cross section seen L-shaped profiled in each case.

The adjusting device 10 essentially consists of retaining support and a fixed 20 held at the door body 2 in layer and a securing plate 21 planned between retaining support 20 and attaching bracket 9 as well as a fastening screw 22, which are pivoted into a nut 23 planned at the attaching bracket 9 (Fig. 3). The nut 23 becomes formed in the embodiment by a Schweissmutter, which is 9 disposed at the foot portion 15 of the attaching bracket.
The securing plate 21 takes up the foot portion 15 of the above attaching bracket 9 anti-swiveling and is on a support surface 24 of the underlying retaining support 20 slidable guided (direction E-E).
At the securing plate 21 are two parallel with distance longitudinal, to each other upward turned off, transverse flanges 25 formed, which embrace the foot portion 14 of the attaching bracket 9 at two opposite sides positive. Thus the attaching bracket 9 can become only in transverse direction of dd opposite the securing plate 21 displaced, against what the flanges 25 a rotating protection for the attaching bracket 9 and/or. the guide rail 3 form, if the fastening screw becomes 22 tightened.
Furthermore 21 two parallel with distance to each other disposed, in longitudinal direction extending, are downward directed Führungsstege 26 provided at the securing plate, which cooperate with lateral edge portions 27 of the abutment face 24 of the retaining support 20 and which in transverse direction of the door body 2 fix securing plate 21.
The two Führungsstege 26 make possible a defined sliding movement the securing plate 21 and the attaching bracket 9 to the fixed retaining support 20 relative toward E-E.
In order to obtain an adjustability of the guide rail 3 in longitudinal direction (E-E) and in transverse direction (dd), 21 and 29 provided at the retaining support 20 recesses are 28, those in longitudinal direction at the securing plate (E-E) and in each case transverse direction (dd) a substantial larger longitudinal extension exhibit than the outer diameter D of the fastening screw 22.
In accordance with Fig. 3 is the recesses 28, 29 as square holes formed; they can exhibit however

also another form (circular, rectangular, square or such).

The retaining support 20 covers two upright longitudinal, 24 connected with one another wall portions 30, 31, whereby 33 stopped at the free ends of the wall portions 30, by the abutment face, 31 flanges are 32, which rest upon at the inside of the door body 2 and are with this fixed connected.
In the embodiment the flanges are 32, 33 horizontal formed and with a lower edge area 11 of the door body 2 welded or bonded.
The abutment face 24 runs vertical to the longitudinal extension of the guide rail 3 and is likewise in two planes inclined. Furthermore the abutment face 24 with distance runs to the lower edge area 11 of the door body 2. A simple and rapid adjustment and/or. Attachment of the guide rail 3 becomes thereby achieved that is 35 formed at an outside boundary surface 34 of the door body 2 an opening, by which the fastening screw 22 can be mounted. Thus the liner does not need remote becomes with an additional adjustment (Fig. 4).
In accordance with Fig. 4 the fastening screw 22 from downside by the opening 35 introduced and into the Schweissmutter 23 is pivoted ago. Between the underside of the abutment face 24 and the head portion of the fastening screw 22 is in accordance with Fig. 4 a plain washer 36 disposed.
The opening 35 to the insertion of the fastening screw 22 extended, planned at the door body 2, itself in the region of the retaining support 20 in the region between the two spaced, upright wall portions 30, 31 below the abutment face 24.
Into the opening 35 disposed at the door body 2 becomes after made adjustment and/or. Attachment of the guide rail 3 a plug 37 inserted, is if necessary at any time again more removable (Fig. 4).